

## Claims

1. Network comprising an interconnecting network and several network nodes which are coupled to the interconnecting network and are each adapted, before integration as active network node, for adjustment of their local communication time schedule to the communication time schedules of at least one other network node, wherein a network node to be integrated is adapted to test the activity of other network nodes and, in case of no activity, is assigned as a reference network node for fixed transmission of predetermined position messages of other network nodes within its communication time schedule, and a network node is adapted for integration as an active network node after receipt of position messages for adjustment of its local communication time schedule to that of the reference network node and in case of a positive result of an agreement check of its own communication time schedule with the communication time schedules of at least part of the active network nodes.
2. Network according to claim 1, characterized in that a network node is adapted for examination of whether its communication time schedule coincides with the communication time schedules of at least part of the active network nodes and for counting the agreements and deviations, and the network node is adapted for integration as an active network node only when the number of coincidences is larger than the number of deviations or if there is no deviation.
3. Network according to claim 2, characterized in that the network node, for examination as to whether its communication time schedule coincides with the communication time schedules of at least part of the active network nodes, is provided with a time interval, in which at

least all position messages of the other network nodes which take part in the communication can be transmitted, at least once.

4. Network according to claim 1, characterized in that after detection of no activity, a network node to be integrated is adapted to examine whether a further network node attempts to integrate itself as a reference network node.
5. Network according to claim 4, characterized in that after detection of no activity, a network node to be integrated is adapted to transmit a collision message.
6. Network according to claim 4, characterized in that, during examination for integration as a reference network node, a network node is adapted to
  - initially transmit its own position message,
  - count incoming position messages, and
  - be integrated as a reference network node only if the number of correctly received position messages is larger than the number of the incorrectly received position messages or if all position messages are correctly received.
7. Network node in a network comprising an interconnecting network and several further network nodes which are coupled to the interconnecting network, which, before being integrated as an active network node, is adapted to adjust its local communication time schedule to the communication time schedules of at least one other network node, wherein the network node is adapted to check the activity of other network nodes and in case no activity is detected, it is adapted as a reference network node for transmission of position

messages predetermined in its communication time schedule for other network nodes, and  
the network node is adapted for integration as an active network node after receipt of position messages to adjust its local communication time schedule to the reference network node and in case of positive examination of agreement between its own communication time schedule and the communication time schedules of at least part of the active network nodes.

8. Method for integration of a network node as an active network node in a network comprising an interconnecting network and several further network nodes which are coupled to the interconnecting network, wherein the network node adjusts its local communication time schedule to the communication time schedules of at least one other network node before integration as an active network node, wherein the network node tests activities of other network nodes and if no activity is detected, transmits position messages predetermined in its communication time schedule for other network nodes and wherein the network node is integrated as an active network node if, after receipt of position messages, it adjusts its local communication time schedule to that of the reference network node and has come to a positive termination of a test for agreement between its own communication time schedule and the communication time schedules of at least part of the active network nodes.